POWER SUBWOOFER

KS-303HT/SW-22HT/25HT

SERVICE MANUAL

REVISED

KENWOOD

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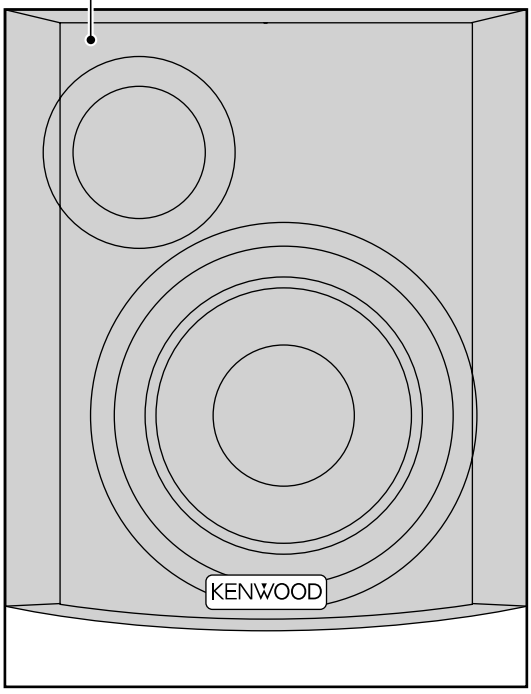

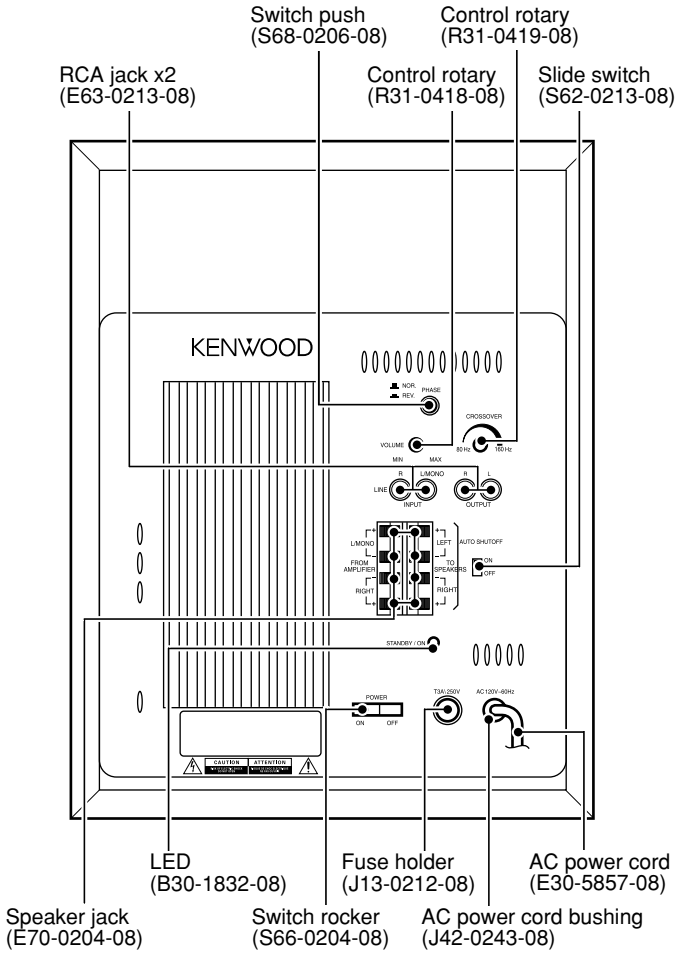

KS-303HT is bundled up satellite speaker. SW-22HT and SW-25HT are Subwoofer only.

SPECIFICATIONS

Front speaker, Center speaker, Rear speaker

		Front speaker	Center speaker	Rear speaker
system		2 way (Magnetically shielded)	2 way (Magnetically shielded)	1 way
Enclosure		Acoustic Air Suspension	Acoustic Air Suspension	Acoustic Air Suspension
Loudspeaker				100 mm(4") Cone type (Full Range type)
	Woofer:	100 mm(4") Cone type	100 mm(4") Cone type	–
	Tweeter:	50 mm(2") Cone type	50 mm(2") Cone type	–
Nominal Impedance		8 Ω	8 Ω	8 Ω
Peak Input Power		–	80W	80W
Maximum Input Power		80W	40W	40W
Sensitivity		88dB/Wat 1m	88dB/Wat 1m	85dB/Wat 1m
Frequency Response		100Hz ~ 20,000 Hz	100Hz ~ 20,000 Hz	100Hz ~ 20,000 Hz
Crossover Frequency		3,000 Hz	3,000 Hz	–
Dimensions	Width:	129mm(5-1/16")	129mm(5-1/16")	129mm(5-1/16")
	Height:	198mm(7-13/16")	198mm(7-13/16")	198mm(7-13/16")
	Depth:	120mm(4-3/4")	120mm(4-3/4")	120mm(4-3/4")
Net Weight		1.2kg(2.6lb)/piece	1.0kg(2.2lb)	0.8kg(1.8lb)/Piece

NOTE: THE GRILLES ON ALL SPEAKERS CANNOT BE REMOVED.

Subwoofer(SW-22HT/SW-25HT)

	System		Subwoofer system with built-in amplifier
Audio section	Output Power		50 Watts RMS, at 4Ω from 40 Hz to 160 Hz with no more than 0.09% total harmonic distortion
	Input Sensitivity/Impedance		
		RCA-type pin-plug jack (LINE IN):	100 mV/43 kΩ, 200 mV/43 kΩ (MONO)
		Push-type terminals:	1.8V/1.2 kΩ
	Turn Over Frequency		80 Hz ~ 160 Hz
	Phase Switching		NORMAL, REVERSE
Speaker section	Enclosure		Bass-Reflex
	Loudspeaker		200 mm (8") Cone type
	Nominal Impedance		4 Ω
	Frequency Response		40 Hz ~ 250 Hz
General	Power Consumption		110 W
	Supply Voltage		AC120 V, 60 Hz
	Dimensions	Width:	286 mm (11-1/4")
		Height:	368 mm (14-1/2")
		Depth:	356 mm (14")
	Net Weight		11.2 kg (24.7 lb)
	Enclosure Finish		High density particle board laminated with simulated wood grain vinyl.

Notes:
1. Kenwood follows a policy of continuous advancements in development. For this reason, specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg. C).

70%

CONTENTS / ACCESSORIES

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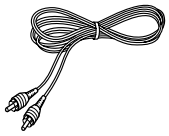
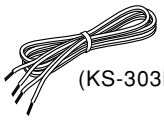
There are 3 models' information for repair in this manual. SW-25HT is new model, however, KS-303HT and SW-22HT are circuit change information(revised).

Accessories

Pin-plug cord (1)
(E30-5839-08)

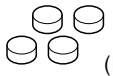


Speaker wires (5)
(W01-1088-08)



(KS-303HT only)

Cushions (4)
(G13-1141-08)

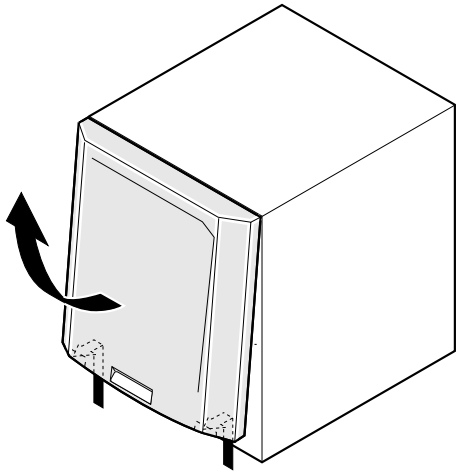


(KS-303HT
and SW-22HT)

DISASSEMBLY FOR REPAIR

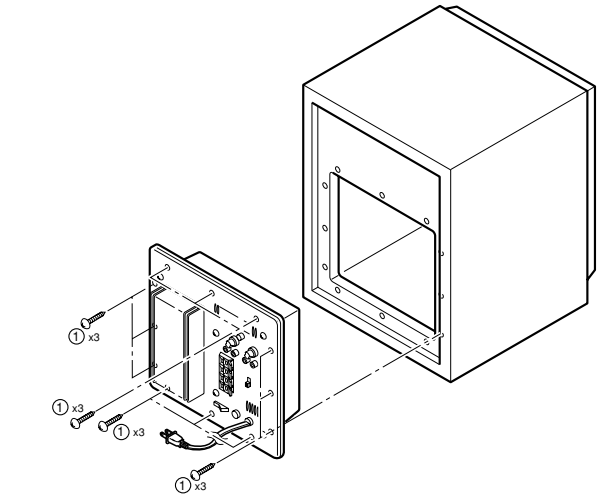
How to Remove the Grille Ass'y

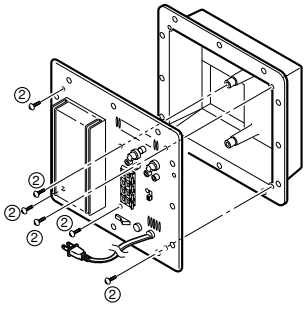
1. You need to remove the grille ass'y if replace the sub-woofer.
2. Insert the screw driver to the gaps of the grille ass'y and lift it up.



How to Remove the Amplifier

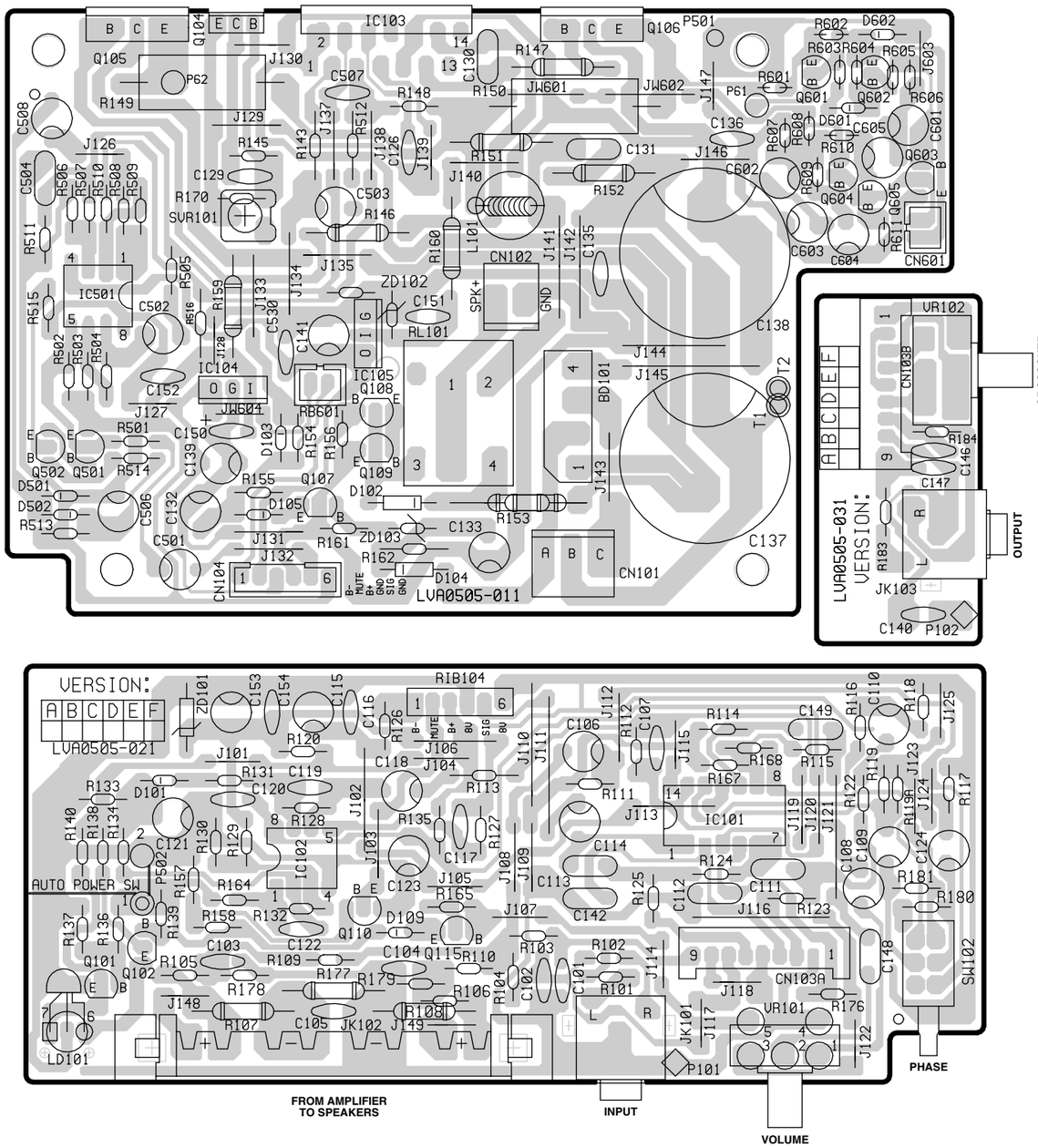
1. Remove screws fixed the rear panel to the enclosure.
2. Remove screws fixed the rear panel to the amplifier cover.



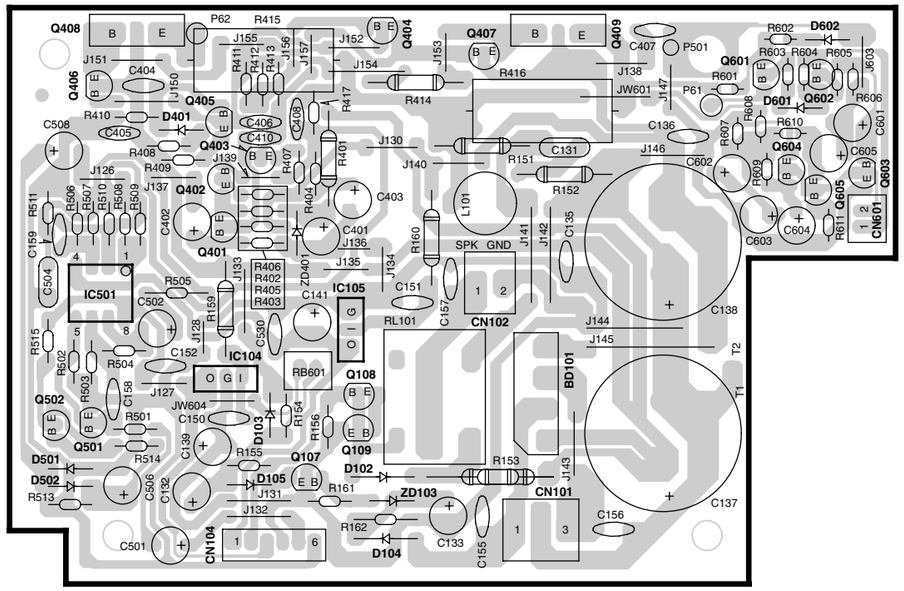


PC BOARD(Component side view)

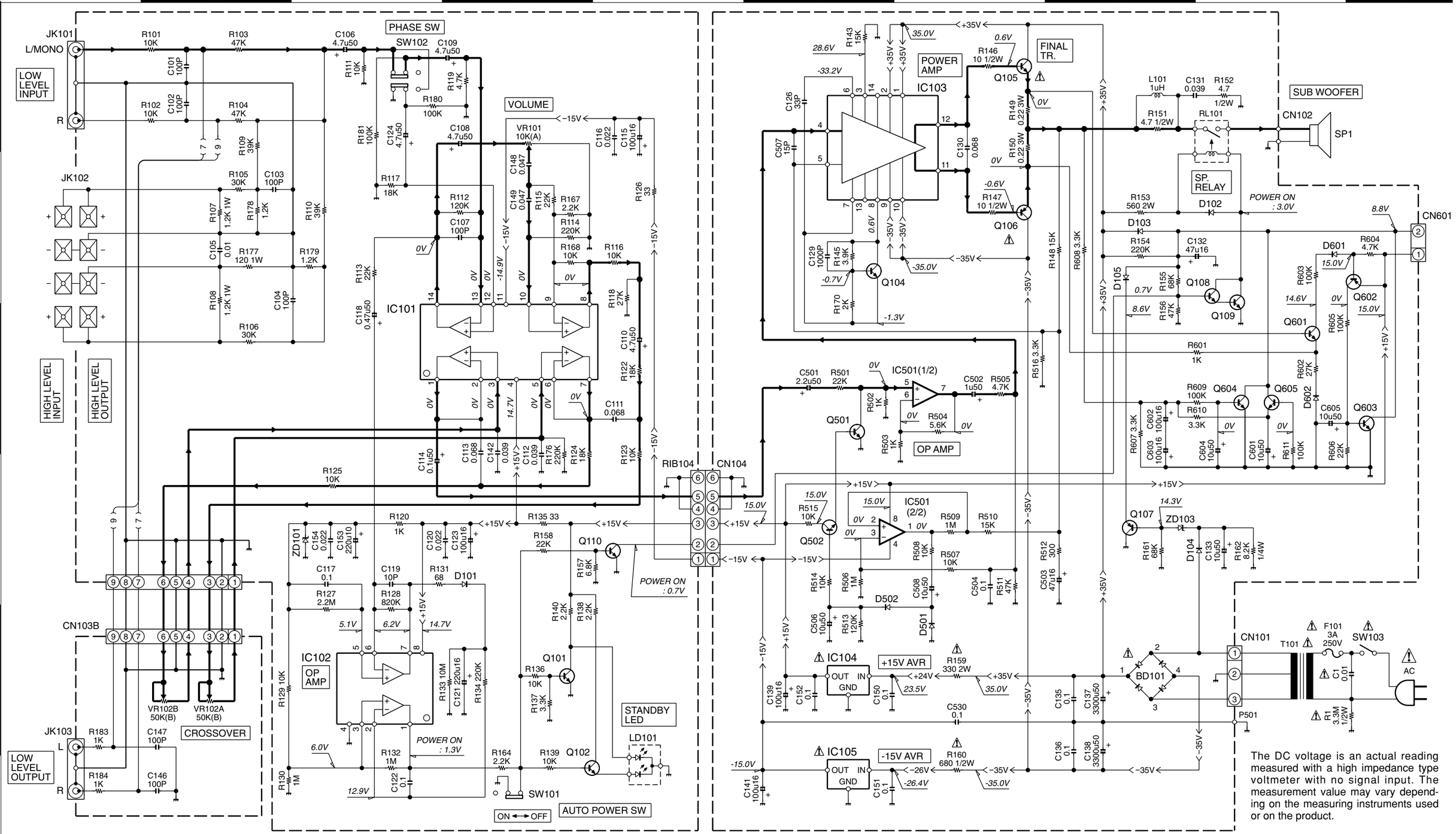
POWER IC TYPE



POWER TRANSISTOR TYPE



Refer to the schematic diagram for the value of resistors and capacitors.



The DC voltage is an actual reading measured with a high impedance type voltmeter with no signal input. The measurement value may vary depending on the measuring instruments used or on the product.

IC101 : TL074CN
IC102,501 : NJM4558D
IC103 : UPC1298V
IC104 : TA7815S
IC105 : TA79015S

Q101,102,108-110,501, 502,601,603-605 : 2SC945(Q,P)
Q104 : 2SD882
Q105 : 2SC5198(O)
Q106 : 2SA1941(O)
Q107,602 : 2SA733A(P)

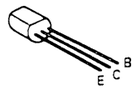
D101,103,105,501,502, 601,602 : 1N4148
D102,104 : 1N4001

ZD103 : MTZJ18B
ZD101 : MTZJ6.2B

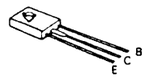
BD101 : RS402L

SIGNAL LINE
GND LINE
+B LINE
−B LINE

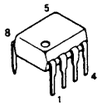
2SA733A
2SC945



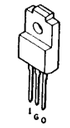
2SD882



NJM4558D

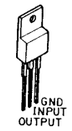


TA7815S

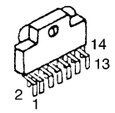


KS-303HT

TA79015S



UPC1298V



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y29-6400-10

KS-303HT

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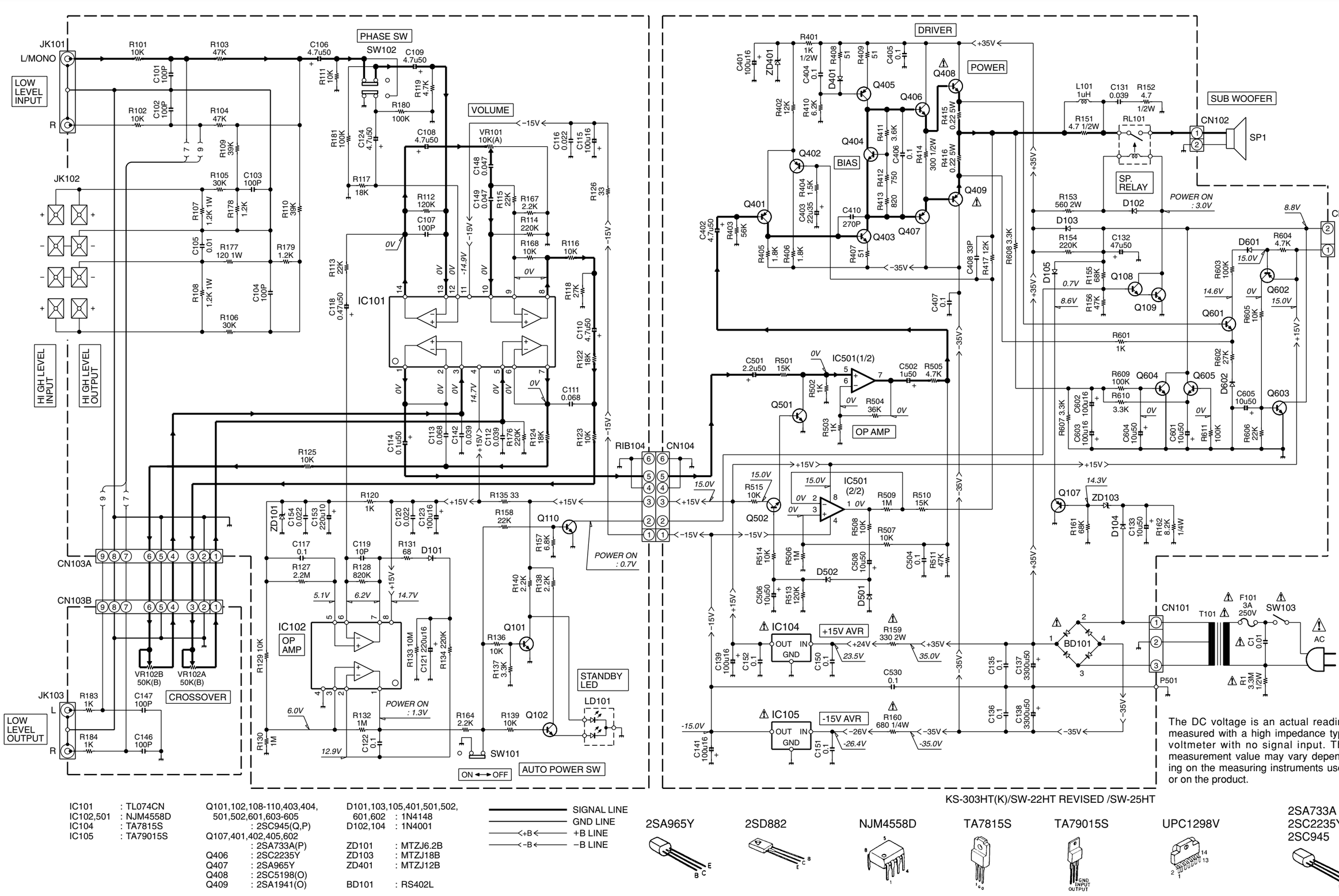

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KS-303HT(K)/SW-22HT REVISED /SW-25HT

IC101 : TL074CN
IC102,501 : NJM4558D
IC104 : TA7815S
IC105 : TA79015S

Q101,102,108-110,403,404, 501,502,601,603-605 : 2SC945(Q,P)
Q107,401,402,405,602 : 2SA733A(P)
Q406 : 2SC2235Y
Q407 : 2SA965Y
Q408 : 2SC5198(O)
Q409 : 2SA1941(O)

D101,103,105,401,501,502, 601,602 : 1N4148
D102,104 : 1N4001
ZD101 : MTZJ6.2B
ZD103 : MTZJ18B
ZD401 : MTZJ12B
BD101 : RS402L

SIGNAL LINE
GND LINE
+B LINE
−B LINE

2SA965Y
2SD882
NJM4558D
TA7815S
TA79015S
UPC1298V
2SA733A
2SC2235Y
2SC945

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Y29-6400-10

SW-22HT/25HT

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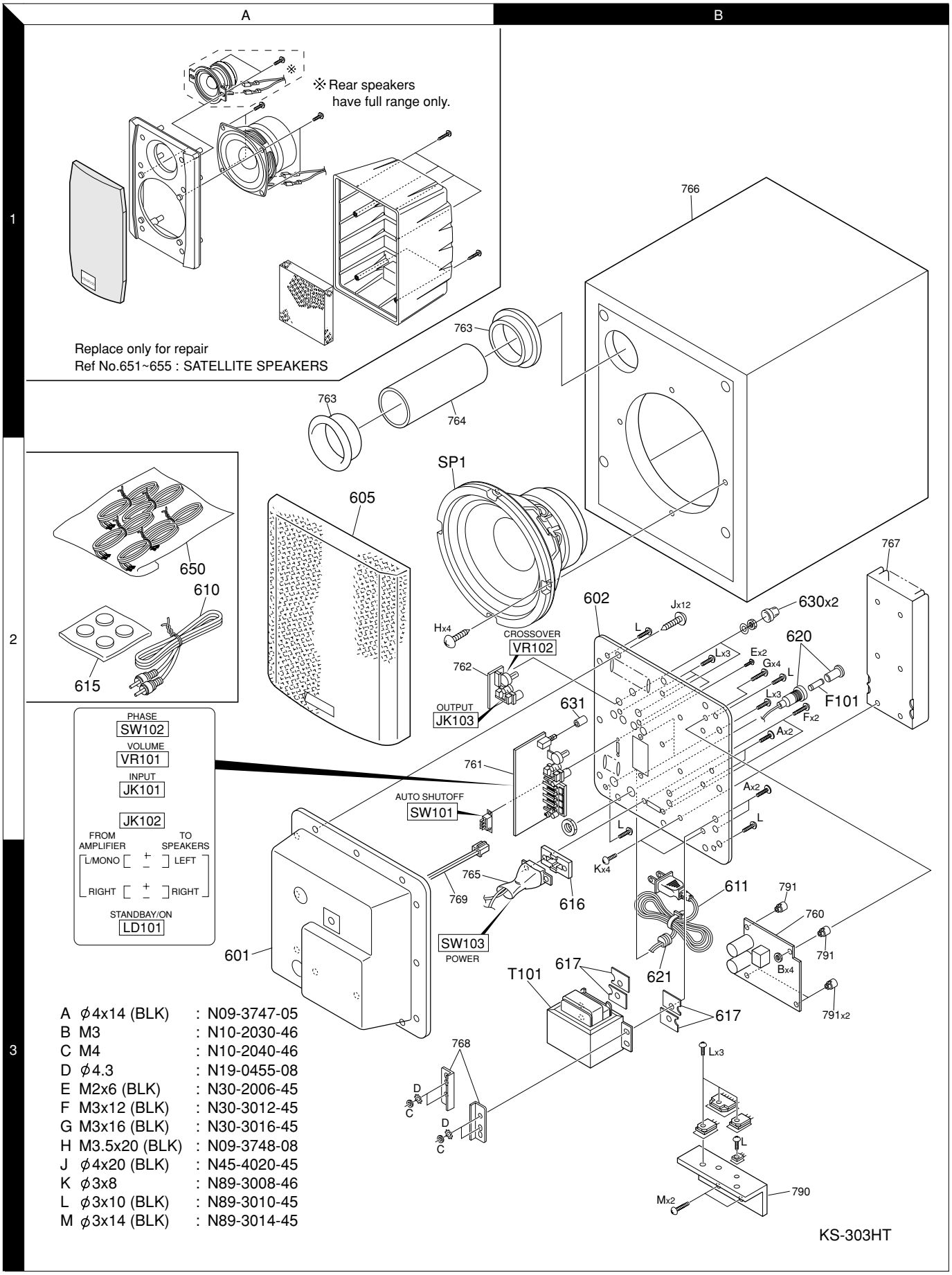
EXPLODED VIEW (UNIT)



Parts with exploded numbers larger than 700 are not supplied.

✻ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

❶

Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
KS-303HT;3 / SW-22HT;2 / SW-25HT;5						
601	3A	✻	A02-2535-08	COVER, REAR PLT,BPA0025-000		
602	2B		A23-5514-08	REAR PLATE GAL0071-014	5	
602	2B		A23-5503-08	REAR PLATE GAL0071-010	3	
602	2B		A23-5504-08	REAR PLATE GAL0071-013	2	
605	2A		B06-1481-08	GRILLE ASSY		
-		✻	B46-0328-03	WARRANTY CARD YWC0004C001	K	
-		✻	B46-0347-03	WARRANTY CARD	P	
-		✻	B61-1062-00	INSTRUCTION	3	
-		✻	B61-1069-00	INSTRUCTION	2	
-		✻	B61-1118-00	INSTRUCTION YOM0082C001	5	
⚠ C1			C91-0647-05	CERAMIC 0.010UF P		
610	2A	✻	E30-5839-08	AUDIO CORD		
⚠ 611	3B	✻	E30-5857-08	LINE CORD 47455-D65		
⚠ F101	2B	✻	F50-0169-08	FUSE,3A,250V KSA2300-101		
615	2A	✻	G13-1141-08	CUSHION	23	
616	3B	✻	G16-0207-08	RUBBER,BLK HARD,BRF0007-001		
617	3B	✻	G16-0208-08	RUBBER,SW200 ICU0007-002		
-		✻	H10-8168-08	POLYSTYREN FOAM,WOOFER		
-		✻	H10-8170-08	POLYSTYREN FOAM,SATELLITE(TOP)	3	
-		✻	H10-8171-08	POLYSTYREN FOAM,SATELLITE(BTM)	3	
-		✻	H25-2286-08	PROTECTION BAG ,WOOFER		
-		✻	H25-2287-08	PROTECTION BAG ACCESSSORY		
-		✻	H25-2294-08	PROTECTION BAG ,SATELLITE	3	
-		✻	H51-1481-08	ITEM CARTON CASE,SATELLITE	3	
-		✻	H51-1482-08	ITEM CARTON CASE,WOOFER	3	
-		✻	H51-1499-08	ITEM CARTON CASE,WOOFER	2	
-		✻	H51-1696-08	ITEM CARTON CAS,ICC0228-004	5	
⚠ 620	2B	✻	J13-0212-08	FUSE HOLDER DFH1229-001		
⚠ 621	3B	✻	J42-0243-08	AC LINE BUSH DBU3050-010		
630	2B	✻	K23-0540-08	KNOB,BLK BPK5018-003		
631	2B	✻	K23-0541-08	PUSH KNOB,BLK BPK8015-002		
⚠ T101	3B	✻	L07-3027-08	POWER TRANSFORM,TTI1201-004		
D		✻	N19-0455-08	WASHER,4.3 HWT8540-110		
H		✻	N09-3748-08	SCREW,M3.5X20,BLK,H011103-320		
⚠ R1			R92-1844-05	CARBON 3.3M J 1/2W		
SW101	2A	✻	S62-0213-08	SW,SLIDE MSS9477-034		
⚠ SW103	3B	✻	S66-0204-08	SW ROCKER MSV0001-004		
SP1	2A	✻	T10-0953-05	SPK DRIVER FDW6080-312		
650	2A	✻	W01-1088-08	SPK CORD ASSY	3	
651	1A	✻	X20-2500-10	SATELLITE SP CENTER	3	
652	1A	✻	X20-2490-11	SATELLITE SP FRONT,L	3	
653	1A	✻	X20-2490-10	SATELLITE SP FRONT,R	3	
654	1A	✻	X20-2510-11	SATELLITE SP REAR,L	3	
655	1A	✻	X20-2510-10	SATELLITE SP REAR,R	3	
ELECTRICAL PARTS (IC:Power Pack type / PT:Power Transistor type)						
LD101	3A	✻	B30-1832-08	LED KEM0001-001		

L : Scandinavia **K :** USA **P :** Canada **R :** Mexico **C :** China **I :** Malaysia
Y : PX(Far East,Hawaii) **T :** England **E :** Europe **G :** Germany **V :** China(Shanghai)
Y : AAFES(Europe) **X :** Australia **Q :** Russia **H :** Korea **M :** Other Areas ⚠ indicates safety critical components .

✻ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

❷

Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
C101-104			CK45FB1H101K	CERAMIC 100PF K		
C105			CK45FB1H103Z	CERAMIC 0.010UF Z		
C106			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		
C107			CK45FB1H101K	CERAMIC 100PF K		
C108-110			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		
C111			CQ92FM2A683J	MYLAR 0.068UF J		
C112			CQ92FM2A393J	MYLAR 0.039UF J		
C113			CQ92FM2A683J	MYLAR 0.068UF J		
C114			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C115			CE04KW1C101M	ELECTRO 100UF 16WV		
C116			CK45FB1H223Z	CERAMIC 0.022UF Z		
C117			CK45FB1H104Z	CERAMIC 0.10UF Z		
C118			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C119			CC45FSL1H100D	CERAMIC 10PF D		
C120			CK45FB1H223Z	CERAMIC 0.022UF Z		
C121			CE04KW1C221M	ELECTRO 220UF 16WV		
C122			CK45FB1H104Z	CERAMIC 0.10UF Z		
C123			CE04KW1C101M	ELECTRO 100UF 16WV		
C124			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		
C126			CC45FSL1H330J	CERAMIC 33PF J	IC	
C129			CK45FB1H102K	CERAMIC 1000PF K	IC	
C130			CQ92FM2A683J	MYLAR 0.068UF J	IC	
C131			CQ92FM2A393J	MYLAR 0.039UF J		
C132			CE04KW1C470M	ELECTRO 47UF 16WV	IC	
C132			CE04KW1H470M	ELECTRO 47UF 50WV	PT	
C133			CE04KW1H100M	ELECTRO 10UF 50WV		
C135,136			CK45FB1H104Z	CERAMIC 0.10UF Z		
C137,138			CE04KW1H332M	ELECTRO 3300UF 50WV		
C139			CE04KW1C101M	ELECTRO 100UF 16WV		
C141			CE04KW1C101M	ELECTRO 100UF 16WV		
C142			CQ92FM2A393J	MYLAR 0.039UF J		
C146,147			CK45FB1H101K	CERAMIC 100PF K		
C148,149			CQ92FM2A473J	MYLAR 0.047UF J		
C150-152			CK45FB1H104Z	CERAMIC 0.10UF Z		
C153			CE04KW1A221M	ELECTRO 220UF 10WV		
C154			CK45FB1H223Z	CERAMIC 0.022UF Z		
C401			CE04KW1C101M	ELECTRO 100UF 16WV	PT	
C402			CE04KW1H4R7M	ELECTRO 4.7UF 50WV	PT	
C403			CE04KW1V220M	ELECTRO 22UF 35WV	PT	
C404-407			CK45FB1H104Z	CERAMIC 0.10UF Z	PT	
C408			CC45FSL1H330J	CERAMIC 33PF J	PT	
C410			CC45FSL1H271J	CERAMIC 270PF J	PT	
C501			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C502			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C503			CE04KW1C470M	ELECTRO 47UF 16WV	IC	
C504			CQ92FM2A104J	MYLAR 0.10UF J		
C506			CE04KW1H100M	ELECTRO 10UF 50WV		
C507			CC45FSL1H150J	CERAMIC 15PF J	IC	
C508			CE04KW1H100M	ELECTRO 10UF 50WV		
C530			CK45FB1H104Z	CERAMIC 0.10UF Z		
C601			CE04KW1H100M	ELECTRO 10UF 50WV		
C602,603			CE04KW1C101M	ELECTRO 100UF 16WV		
C604,605			CE04KW1H100M	ELECTRO 10UF 50WV		
JK101	2A	✻	E63-0213-08	RCA JACK CTP0005-002		
JK102	2A	✻	E70-0204-08	SPK JACK CTP0004-002		

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Teile ohne **Parts No.** werden nicht geliefert.

❸

Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
JK103	2A	✻	E63-0213-08	RCA JACK CTP0005-002		
L101		✻	L90-0403-08	COIL 1UH SHR6619-001		
R107,108			RS14GB3A122J	FL-PROOF RS 1.2K J 1W		
R146,147			RD14BB2H100J	RD 10 J 1/2W	IC	
R149,150		✻	R92-2330-08	FL-PROOF RS 0.22 J 3W	IC	
R151,152			RD14BB2H4R7J	RD 4.7 J 1/2W		
R153			RS14GB3D561J	FL-PROOF RS 560 J 2W		
⚠ R159			RS14GB3D331J	FL-PROOF RS 330 J 2W		
⚠ R160			RD14BB2E681J	RD 680 J 1/4W	PT	
⚠ R160			RD14BB2H681J	RD 680 J 1/2W	IC	
R177			RS14GB3A121J	FL-PROOF RS 120 J 1W		
R401			RD14BB2H102J	RD 1.0K J 1/2W	PT	
R414			R92-2361-05	FUSE R 300 J 1/4W	PT	
R415,416			R92-2360-05	CEMENT 0.22 J 5W		
VR101	2A	✻	R31-0418-08	CNTL ROTARY MRR0103-002		
VR102	2B	✻	R31-0419-08	CNTL ROTARY MRR0503-012		
RL101		✻	S76-0208-08	RELAY MRL2212-005		
SW102	2A	✻	S68-0206-08	SW PUSH MSP0001-006		
⚠ BD101		✻	RS402L	DIODE		
D101			1N4148	DIODE		
D102			1N4001	DIODE		
D103			1N4148	DIODE		
D104			1N4001	DIODE		
D105			1N4148	DIODE		
D401			1N4148	DIODE	PT	
D501,502			1N4148	DIODE		
D601,602			1N4148	DIODE		
IC101		✻	TL074CN	IC		
IC102			NJM4558D	IC(OP AMP X2)		
IC103			UPC1298V	IC(POWER AMP DRIVER)	IC	
⚠ IC104			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
⚠ IC105			TA79015S	IC(VOLTAGE REGULATOR/ -15V)		
IC501			NJM4558D	IC(OP AMP X2)		
Q101,102			2SC945(Q,P)	TRANSISTOR		
Q104			2SD882	TRANSISTOR	IC	
⚠ Q105			2SC5198(O)	TRANSISTOR	IC	
⚠ Q106			2SA1941(O)	TRANSISTOR	IC	
Q107			2SA733A(P)	TRANSISTOR		
Q108-110			2SC945(Q,P)	TRANSISTOR		
Q401,402			2SA733A(P)	TRANSISTOR	PT	
Q403,404			2SC945(Q,P)	TRANSISTOR	PT	
Q405			2SA733A(P)	TRANSISTOR	PT	
Q406			2SC2235Y	TRANSISTOR	PT	
Q407			2SA965Y	TRANSISTOR	PT	
⚠ Q408			2SC5198(O)	TRANSISTOR	PT	
⚠ Q409			2SA1941(O)	TRANSISTOR	PT	
Q501,502			2SC945(Q,P)	TRANSISTOR		
Q601			2SC945(Q,P)	TRANSISTOR		
Q602			2SA733A(P)	TRANSISTOR		
Q603-605			2SC945(Q,P)	TRANSISTOR		
ZD101			MTZJ6.2B	ZENER DIODE		
ZD103			MTZJ18B	ZENER DIODE		
ZD401			MTZJ12B	ZENER DIODE	PT	

L : Scandinavia **K :** USA **P :** Canada **R :** Mexico **C :** China **I :** Malaysia
Y : PX(Far East,Hawaii) **T :** England **E :** Europe **G :** Germany **V :** China(Shanghai)
Y : AAFES(Europe) **X :** Australia **Q :** Russia **H :** Korea **M :** Other Areas ⚠ indicates safety critical components .

KS-303HT/SW-22HT/25HT

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